June 23, 2003

TO: Internal File

THRU: Daron R. Haddock, Permit Supervisor

FROM: Peter H. Hess, Environmental Scientist III/Engineering, Team Lead

RE: Abandoned Equipment, Co-Op Mining Company, Bear Canyon Mine, C/015/025-03C

SUMMARY:

The permittee submitted an amendment to the mining and reclamation plan on May 29, 2003 in response to several concerns aired by the assigned reclamation specialist. The first concern was relative to the abandonment of a shuttle car in the #1 Mine (Hiawatha coal seam). The Division requires all permittees to identify the location of machinery that is left in underground workings, such that a finding can be made relative to the potential for impact to ground water sources. The other issues that have been addressed include an update of violation information and revised surface facilities maps showing the location of explosive and detonator storage (R645-301-521.167).

TECHNICAL ANALYSIS:

GENERAL CONTENTS

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

The permittee was issued three violations in the month of January 2003. These were N03-46-1-2, 1 of 1 relative to "failure to minimize to the extent possible additional contributions of sediment to stream flow or to flow outside the permit area", and 2 of 2, "failure to maintain diversions". The last violation (N03-40-1-1) was issued to the permittee for failure to conduct the requirements of the approved ground water monitoring regime for 2002 for four groundwater-monitoring wells.

The permittee completed the remedial actions necessary to abate each of violations in a timely fashion. All of the violations have been terminated, the last having been completed on May 29, 2003.

The permittee does not have any current State or Federal permits in suspension or revocation.

The permittee has not forfeited a bond or other security in the last five years.

The purpose of submitting the notice of violation information received in this submittal is to disclose that information relevant to the most recent violations of SMCRA such that same will not hinder the future issuance of permits.

Findings:

The application has met the minimum regulatory requirements of this section.

OPERATION PLAN

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Disposal Of Noncoal Mine Wastes

The permittee experienced an unanticipated roof fall in the 1st North section of the Bear Canyon #1 Mine (Hiawatha seam) on January 14, 2003 at approximately 6:45 AM. The coal production from the area was being generated via retreat mining (pillar extraction). The roof fall (130 feet in length X 20 feet in width X 20 feet above the coal seam) buried a coal hauler (battery powered), an electrical distribution box, and a shop trailer. After the investigation of the roof fall by the permittee and MSHA, all remaining equipment was removed from the section and the area was sealed with MSHA approved mine seals.

The permittee notified the Division concerning the incident on January 15, 2003 during the initiation of the regular monthly inspection. At that time, the assigned reclamation specialist informed the permittee that it was necessary to submit a permit amendment to document the location of the abandoned machinery such that the Division can make a finding relative to the potential for the degradation of the ground and/ or surface water regimes within the permit area.

The permittee submitted information relative to the roof fall / buried, abandoned equipment on May 29, 2003.

The submittal contains PLATE 7-10B, which is a map of the #1 Mine workings in the Hiawatha seam. PLATE 7-10B locates the area in the 1st North section where the battery powered coal hauler, the electrical distribution box, and the shop car are buried. PLATE 7-10B was P.E. certified by Mr. Charles Reynolds, the permittee's Manager of Engineering Services, on April 24, 2003.

The buried mining apparatus would contain the following liquids, which could potentially impact ground water emanating in the area; gear oil(s) in the wheel units and speed reducers of the coal hauler, and battery electrolyte in the DC power cells of that machine. The shop car may contain quantities of hydraulic oil ..., tube grease, gear oil(s). Generally, shop cars contain tools, hydraulic fittings and hoses, and other miscellaneous machine repair items. The electrical distribution box will contain quantities of copper, aluminum and other assorted metals, and could contain dielectric substances in capacitors, as well as insulating material.

Relative to the ground water regime in the 1st North area, PLATE 7-10B depicts a floor seep in the northwest corner of the section generating four gallons of water per minute (SBC-11). A roof dripper located 700 feet west of the buried machinery is noted as generating less than one-tenth of a gallon per minute. A vertical borehole connects the Hiawatha seam with the overlying Blind Canyon seam. A second vertical drill hole reports forty gallons per minute to SBC9. Water is shown to collect in at least two areas of the 1st North section.

The permittee has included text relative to the abandoned equipment portion of the submittal that is included as Appendix 7-P. Page 2 of Appendix 7-P (page 7P-2) indicates that the floor elevation where the equipment is buried is higher than the surrounding area. Thus, the equipment should be close to or last to intercept accumulated ground water as the area floods.

The permittee has included Figure 7P-1, Hiawatha Seam Mine Water that depicts the anticipated flow path that any ground water accumulating in the sealed area should follow to the surface. "P" traps have been installed in the #1 and #5 seals, (numbered from left to right as if looking toward the northern boundary of the permit area) which will allow ground water to flow from the sealed area toward the vertical drill hole to SBC-9.

A maximum level of water accumulation elevation line is depicted on Figure 7P-1. The approximate elevation of the Hiawatha seam floor where the machinery was buried has been calculated to be 7442 feet. Water will begin discharging out of entry 26 at elevation 7434 feet. Thus the floor elevation upon where the machinery is located is approximately eight feet higher than the elevation at which water will begin discharging from the abandoned area.

PLATE 7-10B depicts two mine water discharge lines emanating from the Hiawatha portal area; a two inch culinary line and a four inch mine water discharge line. The route that these lines take once they reach the surface is not known.

The permittee has not included the following items that are felt to be necessary in order for the Division to make the necessary finding relative to a potential effect on the ground water regime in the Bear Canyon area:

1) The volume of battery electrolyte contained in the two batteries that supplied direct current for the operation of the battery powered coal hauler.

2) The volume (approximate, if any) of any greases, gear oils, or hydraulic oils associated with the "shop car" that was buried beneath the cave. MSDS sheets need to be submitted for each of the lubricants that were buried with the shop car, should there be any.

3) The manufacturer and model of the electrical distribution box, as well as a letter from the manufacturer of the electrical distribution box indicating whether the box contained any internal components utilizing chemicals (dielectrics, or other similar substances) that could have a potential impact on ground water.

Findings:

The submitted information is not adequate such that the Division can make a finding relative to the potential for impact to the ground and/or surface water regimes within the Bear Canyon permit area. The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-528.330, The Permittee must provide information, such as type and volume, on fluids and other potential pollutants associated with the abandoned equipment.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Mining Facilities ps

The requirements of R645-301-512.120 are that the surface facilities and operations maps included within the permit must be P.E. certified by a Utah registered professional engineer. The requirements of R645-301-521.167 are that the location of each explosive storage and handling facility must be depicted on those P.E. certified surface facilities maps.

The permittee has completed the mining activities in the #1 and #2 Mines located on the west side of Bear Canyon and has developed the new #3 Mine in the Wild Horse Ridge addition. As of the date of this tech memo, the access road to the #4 Mine is still being developed. As such the permittee felt it necessary to relocate the dynamite and the detonator storage magazines to the local of the new #3 Mine area. Dynamite is often used underground for construction processes, as well as on the surface for boulder size reduction and other surface construction activities.

The dynamite and detonator storage magazines were previously located west of the electrical substation associated with the #1 Mine (Hiawatha portals). These were depicted on PLATE 2-4C. The new location of the dynamite and detonator storage magazines is adjacent to the #3 Mine access road, approximately eight hundred and thirty feet up the Canyon from the major topsoil storage pile in the area. The new explosives storage facilities locations are depicted on PLATE 2-4F.

The permittee has submitted revised PLATES 2-4C and 2-4F deleting the old locations and identifying the new locations for the explosives and detonator storage magazines. Both maps are P.E. certified by Mr. Charles Reynolds, Utah registered professional engineer.

Findings:

The submittal meets the minimum regulatory requirements of R645-301-512.120 and R645-301-521.167 for explosives storage facilities.

RECOMMENDATIONS:

The permittee must submit additional information before recommendation for approval can be made.